

WHAT IS CLAIMED IS:

1. A method for using an occupant's weight detecting system for an occupant sitting on a seat of a vehicle, comprising:

obtaining a first output from a first weight detecting unit wherein the first output changes with a change in weight;

obtaining a second output from a second weight detecting unit wherein the second output changes inversely at a rate similar to the rate at which the first output changes as weight changes, said first and second weight detecting units having similar characteristic of change in first and second outputs with respect to change in temperature; and

calculating the weight of the occupant based on a value obtained by inverting the output from one of the first and second weight-detecting units and adding the inverted output to the output from the other weight-detecting unit.

2. An occupant's weight detecting system for detecting weight of an occupant sitting on a vehicle made to function in accordance with the method of claim 1.

3. An occupant's weight detecting system for detecting weight of an occupant sitting on a seat of a vehicle, comprising:

a first weight detecting unit having a first sensor plate and first strain resistors, said first sensor plate having a first surface to which said first strain resistors are fixed, said first sensor plate being adapted to flex under the weight of the occupant, said first weight detecting unit providing an output which changes with a change in weight;

a second weight detecting unit having a second sensor plate and second strain resistors, said second sensor plate having a second surface to which said second strain resistors are fixed,

said second sensor plate being adapted to flex under the weight of the occupant, said second surface being vertically opposite a similarly located surface on said second sensor plate as said first surface on said first sensor plate, said second weight detecting unit providing an output which changes inversely at a rate similar to the rate at which the output of said first weight detecting unit changes as weight changes, said first and second weight detecting units having similar characteristic of change of outputs with respect to change of temperature; and

means for calculating the weight of the occupant based on a value obtained by inverting the output from one of the first and second weight-detecting units and adding the inverted output to the output from the other weight-detecting unit;

wherein said weight characteristic of the occupant's weight detecting system is substantially temperature insensitive.

4. The occupant's weight detecting system of claim 3 wherein said first and second sensor plates have flexing portions, said first strain resistors being located on opposite sides of said flexing portions of said first sensor plate and said second strain resistors being located on opposite sides of said flexing portions of said second sensor plate.

5. The occupant's weight detecting system of claim 2 or 3, wherein the first weight-detecting unit and the second weight-detecting unit use a common sensor plate.

6. The occupant's weight detecting system of claim 3 including an automobile.

7. A method for using the occupant's weight detecting system of claim 3, comprising:

obtaining the output from the first weight detecting unit;  
obtaining the output from the second weight detecting unit;  
and  
calculating the weight characteristic from the outputs of  
said first and second weight detecting units.